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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,463	01/08/2004	Vladimir Katzman	51485/RAG/A771	6211
23363 7590 08/28/2007 CHRISTIE, PARKER & HALE, LLP PO BOX 7068 PASADENA, CA 91109-7068			EXAMINER JEANGLAUDE, JEAN BRUNER	
			ART UNIT 2819	PAPER NUMBER
			MAIL DATE 08/28/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/754,463

Applicant(s)

KATZMAN ET AL.

Examiner

Jean B. Jeanglaude

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 13 is/are rejected.
- 7) ☒ Claim(s) 9 - 12, 14 - 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 – 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Possyley et al. (US Patent Number 6,624,766).

3. Regarding claim 1, Possyley et al. discloses a method of bit order synchronization during multiplexing and demultiplexing digital data (fig. 19C) comprising generating a serial data bit stream from a parallel data word by a serializer, the serial data bit stream includes a marking pulse imposed upon a bit of the serial data bit stream (as shown in fig. 19C, a serial data is generated at 1908 )(see col. 21, lines 33 – 65) and reconstruction the parallel data word from the serial data bit stream by a deserializer (1916, fig. 19C) using the marking pulse (see col. 19, lines 6 – 29).

4. Regarding claim 2, Possyley et al. discloses a method (figs. 19C) wherein the marking pulse is imposed upon a specified bit in the serial data bit stream to mark the length of a serial data word corresponding to the parallel data (col. 19, lines 6 – 29).

5. Regarding claim 3, Possyley et al. discloses a method (figs. 16, 19C) wherein the marking pulse is imposed upon a specified bit in the serial data bit stream to mark the

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position of a serial data word corresponding to the parallel data word (col. 19, lines 6 – 29).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4 - 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hilgers et al. (US PG PUB 2003/0103533) in view of Burns et al. (US Patent Number 6,154,797).

8. Regarding claim 4, Hilgers et al. discloses a serializer(fig. 1) for converting N-bit wide parallel input data words with rate B into a serial data bit stream with rate NB of out-going serial words comprising a first multiplexer (100, fig. 1) with ratio N:L for conversion of the N-bit wide parallel input data words with rate B into L-bit wide data words with rate NB/L; a converter (120, fig. 1) for generating encoded data words from the L-bit wide data words; a second multiplexer (200, fig. 1) with ration L:1 for conversion of the encoded data words with rate NB/L into a serial data bit stream with rate NB; a timing circuit (not shown) for generating the synchronization signal (see paragraph 0026). Hilgers et al. does not specifically disclose a serializer that comprises a multilevel buffer for generating a multilevel output signal with marking pulses using the serial bit data stream and a synchronization signal . However, Burns et al., in a related field, discloses a system and method for multiplexing serial links what comprises a

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multilevel buffer (106, fig. 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hilgers et al.'s system with that of Burns et al. in order to multiplex a plurality of serial links that are clocked by a nonsynchronous clock.

9. Regarding claims 5 – 8, the combination of Hilgers et al. and Burns et al. would achieve the same end result as a serializer wherein the timing circuit receives a frequency selection signal for selecting between a high frequency reference clock signal and a low frequency reference clock signal; a serializer wherein the high frequency clock signal is an external reference clock signal; a serializer wherein the low frequency clock signal is an external reference clock signal; a serializer wherein the timing circuit generates a timing signal for the first multiplexer, the second multiplexer, the converter, and the multilevel buffer since multiplexing and demultiplexing requires a timing circuit to perform well its operation and the timing circuit would include frequency and the timing circuit would feed all the element in the circuitry. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hilgers et al.'s system with that of Burns et al. in order to multiplex a plurality of serial links that are clocked by a nonsynchronous clock.

10. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lentine et al. (USPGPUB 2004/0047371) in view of Possyley et al. (US Patent Number 6,624,766).

11. Regarding claim 13, Lentine et al. discloses a deserializer circuit (figs. 1 – 6) for generating N-bit wide parallel data words with rate B and a predetermined bit order from

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an incoming serial data bit stream with rate NB comprising a first demultiplexer (103A) with ration 1:L for generating L-bit wide data words with rate NB/L using the serial data stream; a data digital converter (104) for generating decoded data words using the L-bit withed data words; a second demultiplexer (101B) with ration L:N for converting the decoded data words into N-bit wide parallel data words with rate B and a bit order. Lentine et al. does not specifically discloses a deserializer that comprises a timing circuit for generating timing signals using marking pulses imposed on the incoming serial data stream and for generating a serial stream with rate NB. However, Possyley et al., in a related field, discloses a system (fig. 19) that comprises a timing circuit that generates timing signals using marking pulses imposed on the incoming serial data stream and for generating a serial stream with rate NB (see col. 19, lines 6 – 29). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lentine et al.'s system with that of Possyley et al. in order to recover and transmission RZ formatted data.

#### Allowable Subject Matter

12. Claims 9 – 12, 14 – 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (See PTO-892).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Jeanglaude whose telephone number is 571-272-1804. The examiner can normally be reached on Monday - Friday 7:30 A. M. - 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on 571-272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jean Bruner Jeanglaude  
Primary Examiner  
August 21, 2007